July 14, 2015

Kathryn Hernandez
USEPA, Region VIII (8EPR-SR)
1595 Wynkoop Street
Denver, CO 80202

RE: Richardson Flat OU2 and OU3 Quarterly Status Report for April through June 2015.

Dear Ms. Hernandez,

This Quarterly Status Report details site activities conducted at Richardson Flat OU2 and OU3 (Site) for April through June 2015.

Activities Conducted:

- 4/20/2015 and 6/22/2015: Collected water level measurements from ground water piezometers.
- Completion of second quarter sampling:

Surface Water	Shallow Ground Water
▪ Sample Dates: 5/11/2015 through 5/13/2015	▪ Sample Dates: 5/26/2015 through 5/28/2015
▪ Water samples were collected from 23 locations.	▪ Water samples were collected from 25 piezometers.
o HS and NGCF were not sampled after review of first quarter data.	o Insufficient water to complete sample:
o 4 opportunity locations from the first quarter were not sampled.	▪ MR-1
▪ No flow data:	▪ MR-2
o Insufficient flow:	o Piezometers pumped dry, no samples collected:
▪ SCBOU4	▪ MR-4
▪ MRUBP	▪ T3E1125
▪ SCURTFB	▪ T4E1375
▪ PFOU1	▪ P2-1 (B)
▪ SCOU3BC	
o Debris, unsafe conditions:	
▪ SCAOU4	

Laboratory results and maps of sample locations are attached; however, data needs to be checked for quality assurance.

Other Activity:

- 6/25/2015: Site visit, Richardson Flat OU2 and OU3
- 4/29/2015: NRDA plan, United Park City Mines Company, Park City, Utah
- 4/28/2015: Stakeholder prep meeting, County Library, Park City, Utah
- 4/27/2015: RF NRD Consent Decree discussion, Holland & Hart, Salt Lake City, Utah
- Continued to analyze data, looking for trends and other information needed to complete EE/CA.

Planned Activities: Quarter 3, July through September 2015

- Review trustee comments on draft Natural Resource Damage Assessment plan.
- Provide Second Quarter Data Quality Assurance Review.
- Continue sampling activities in accordance with the SAP.
    - July:
        - Collect water level measurements from ground water piezometers.
        - Continue soil sampling and collect remaining sediment samples.
    - August:
        - Collect water level measurements from ground water piezometers.
        - Collect macro-invertebrate, fish, and vegetation samples.
    - September: begin third quarter sampling event for surface and ground water.
- Provide first and second quarter sample results to landowners as requested in access agreements.
- Continue to study data being collected.

Planned Activities: Quarter 4, October through December 2015

- Continue sampling activities in accordance with the SAP.
    - October:
        - Collect water level measurements from ground water piezometers.
    - November:
        - Begin fourth quarter sampling event for surface water and ground water.
    - December:
        - Collect water level measurements from ground water piezometers.
- Provide third and fourth quarter sample results to landowners as requested in access agreements.
- Continue to study data being collected.

If you should have any questions or comments, please contact myself at 435-333-6603 or Kerry Gee at 435-333-6601.

Best Regards,

Andrea Hannan
Environmental Project Manager
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UNITED PARK CITY MINES COMPANY

Attachments

Cc: Kerry Gee, Kevin Murray, Dan Wall, John Isanhart, Christine Cline, Muhammad Slam, Jim Fricke, Nicole Squires, Trent Duncan, Amelia Piggott, Sandra Allen, Dana Jacobsen, Heather Shilton, Brad Johnson, Kent Sorenson, Casey Padgett

DATA QUALITY ASSURANCE REVIEW

Richardson Flat Tailings Site
Operable Units 2 and 3

Park City, Utah

April 10, 2015

Prepared for:

United Park City Mines Company
P.O. Box 1450
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Prepared by:

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1. SUMMARY

Surface water, groundwater, tailings and soil sampling was conducted at Richardson Flat Tailing Site Operable Units 2 and 3 (OUs 2 & 3) in Park City, Utah during March 2015 in accordance with the approved SAP (RMC, 2014 and USEPA 2014). This report presents the quality assurance (QA) review of sampling objectives, field procedures and validation of laboratory results from samples submitted for laboratory analysis. This QA review was performed in accordance with the approved project-specific Quality Assurance Project Plan (RMC 2014) and U.S. EPA guidance (USEPA 2010 and USEPA 2006).

This is the first quarterly review of surface water and groundwater data collected. A total of four quarters of sampling will be performed in accordance with the FSP during 2015.

EPA provided daily oversight during surface water and groundwater sampling in OUs 2 & 3. Tailings and soil field sampling was conducted in OU3, in coordination with piezometer installation. The EPA did not oversee piezometer instillation.

A total of 63 samples were collected, including 55 original samples and 8 QA/QC samples. Soil and tailings samples were collected on March 3, 2015. Surface water and groundwater samples were collected March 9 to March 16, 2015. Surface water sample locations are presented in Figures 1-1 through 1-4. Groundwater sample locations are presented in Figures 2-1 through 2-4. Soil sample locations are presented in Figure 3. A summary table of latitude and longitude coordinates of sample locations is available on request.

Water, soil and tailing samples were analyzed by American West Analytical Laboratories using water, wastewater, and soil protocols and Level II quality assurance reporting for the metals, metalloids, and other non-metallic compounds and parameters.

The quality review indicates that the data generated during the implementation of the SAP are of good quality and acceptable for their intended use.

2. REVIEW OF SAMPLING OBJECTIVES

The goal of the sampling effort, as specified in the approved SAP (RMC, 2014) was to collect data to define the nature and extent of contamination and to collect data needed to evaluate potential risks posed to human and ecological receptors by metals in surface water, shallow groundwater, soils, sediments, tailings, and biota in the vicinity of OU2 and OU3. Reviews of field procedures, laboratory data and data generated to date indicate that the information generated are on track to meet the objectives specified in the approved Field and Sampling Plan (FSP) Table 3.2 (RMC, 2014).

3. FIELD PROCEDURES REVIEW

All data generated during sampling event are housed in the central project files, and maintained in the RMC office. Sample collection followed the procedures in the approved project Quality Assurance Project Plan (QAPP) as summarized below:

- All samples were collected in appropriate containers with appropriate preservatives (where applicable) as supplied by the laboratory;
- All samples were collected following appropriate Standard Operating Procedures as specified in the QAPP;
- All specified field parameters were collected (pH, temperature, conductivity, DO, ORP, flow) except at the six groundwater sample locations. Conductivity was not recorded at the locations listed below due to insufficient field forms:
    - P2-5;
    - P2-1(A);
    - T6E0375;
    - T6W0625;
    - T6E1350; and
    - T5E1875.

- All field reading instruments were calibrated daily per manufacturer instructions and Standard Operating Procedures as specified in the QAPP;
- All samples were hand delivered to the laboratory as quickly as possible following collection;
- Required field QA/QC samples were collected; and
- All required sample documentation was completed and reviewed (field notes, Chain-of-Custody forms, custody seals, shipping labels).

One groundwater sampling location was relocated from the proposed sampling locations in the SAP. Piezometer FPT-6A was purged and in good working condition during the November 2014 reconnaissance; however, during the March 2015 sampling event the piezometer had extensive damage and was snapped from the base. To meet the DQOs, an alternative piezometer approximately 200 feet northeast was sampled. Based on known groundwater flow, this sample location is representative, and change did not alter the intent of the SAP in any way.

During the groundwater sampling event, four piezometers were pumped dry and no samples were collected:

- MR-2;
- MR-5;
- P2-1; and
- T4E1375.

Surface water flows were measured when surface water samples were collected so that metals loading could be determined. The flow meter was calibrated to standing water in a 5-gallon bucket prior to sampling. A summary table of surface water flow measurements is available upon request.

As stated in the FSP, surface water sampling locations will be added in the field if flow is observed in irrigation ditches … or from springs or seeps discharging shallow groundwater (RMC 2014). Four opportunity samples were collected during the surface water sampling event:

- OU2-0-SW-PPTRIB;
- OU2-0-SW-SGDINF;
- OU2-0-SW-STRGD; and
- OU3-0-SW-SPRRP.

A field portable X-Ray fluorescence meter (XRF) was used as a screening tool during the soil sampling event to determine when at-depth soil sampling had reached the vertical extent of contamination. The XRF was checked against the RCRA1 180-661 standard daily and the concentrations were within the acceptable range. A summary table of the XRF data is available upon request.

All work was performed in accordance with the Site Health and Safety Plan, with no incidents logged.

Based on this review, modification or improvements to potential future sampling events will include a revised groundwater sampling form with the addition of a column to record conductivity.

4. SAMPLE INVENTORY

A total of 63 samples were collected by Resource Management Consultants, Inc. and United Park in March 2015. Sample labeling and ID conventions presented in the SAP were followed and no alterations were made. The samples were hand delivered under chain-of-custody to American West Analytical Laboratories in Salt Lake City, Utah, for analysis of metals, metalloids, and other non-metallic compounds and parameters. These samples are summarized in this review and in the following table.

Table 1: Water, Tailings, Soil and Sediment Samples Included in Quality Assurance Review

Sample Date: 3/9/2015		Sample Date: 3/10/2015		Sample Date: 3/11/2015	
Field Sample ID	**Laboratory Sample ID**	**Field Sample ID**	**Laboratory Sample ID**	**Field Sample ID**	**Laboratory Sample ID**
OU2-0-SW-SCI80	1503130-001	OU2-0-SW-SCWWT	1503165-001	OU2-0-SW-SCBNPRR	1503199-001
OU2-0-SW-PPTRIB	1503130-002	OU2-9-SW-SCWWT	1503165-002	OU3-0-SW-SC248NRB	1503199-002
OU2-0-SW-SCI	1503130-003	OU2-0-SW-ASCWWT	1503165-003	OU3-0-SW-SCOU3BC	1503199-003
OU2-9-SW-SCI80	1503130-004	OU2-0-SW-SGDINF	1503165-004	OU3-0-SW-NGCF	1503199-004
OU2-0-SW-BIRF	1503130-005	OU3-0-SW-NPCWR	1503165-005	OU3-9-SW-SCOU3BC	1503199-005
OU2-0-SW-IRF	1503130-006	OU3-0-SW-SPCWR	1503165-006	OU3-0-SW-HS	1503199-006
OU2-0-SW-AIRF	1503130-007	OU2-0-SW-STRGD	1503165-007	OU3-0-SW-SC1C	1503199-007
		OU2-0-SW-SPRRP	1503165-008	OU2-0-GW-T5E1875	1503200-001
		OU2-0-GW-P25	1503164-001	OU2-0-GW-P2-2 (B)	1503200-002
		OU2-9-GW-P25	1503164-002	OU2-0-GW-P2-2(A)	1503200-003
		OU3-0-GW-T6E1350	1503164-003	OU2-9-GW-P2-2(A)	1503200-004
		OU2-0-GW-T6E0375	1503164-004	OU2-0-GW-T5E0875	1503200-005
		OU3-0-GW-P21A	1503164-005	OU2-0-GW-T4E0875	1503200-006
		OU3-0-GW-T6W0625	1503164-007		

Sample Date: 3/13/2015		Sample Date: 3/16/2015		Sample Date: 3/2/2015	
Field Sample ID	**Laboratory Sample ID**	**Field Sample ID**	**Laboratory Sample ID**	**Field Sample ID**	**Laboratory Sample ID**
OU3-0-SW-SC248AC	1503251-001	OU3-0-SW-SCBOU4	1503277-001	OU3-0-SO-MR1-0.501	1503022-001
OU3-0-SW-SC248BC	1503251-002	OU3-9-SW-SCBOU4	1503277-002	OU3-0-SO-MR1-1015	1503022-002
OU3-9-SW-SC248BC	1503251-003	OU3-0-SW-ASCAOU4	1503277-003	OU3-0-TL-MR2	1503022-003
OU1-0-SW-PFOU1	1503251-004	OU3-0-GW-MR1	1503277-004	OU3-0-SO-MR2-0512	1503022-004
OU3-0-SW-SCRF72	1503251-005	OU3-0-GW-MR3	1503277-005	OU3-0-TL-MR3	1503022-005
OU3-0-SW-SCHFTR	1503251-006	OU3-0-GW-MR5	1503277-006	OU3-0-SO-MR3-1315	1503022-006
OU3-0-SW-SCRFR	1503251-007	OU3-0-GW-MR6	1503277-007	OU3-0-SO-MR4-0.501	1503022-007
OU3-0-SW-SCURTFB	1503251-008	OU3-0-GW-RT-12	1503277-008	OU3-0-SO-MR4-1015	1503022-008
OU3-0-SW-MRUBP	1503251-009	OU3-0-GW-RT-11	1503277-009	OU3-9-SO-MR4-1015	1503022-009
OU3-0-GW-T2W0375	1503250-001	OU3-0-GW-FPT-2-B	1503277-010	OU3-0-SO-MR5-0102	1503022-010
OU3-0-GW-T2E0125	1503250-002	OU3-0-GW-FPT-6-A	1503277-011	OU3-0-SO-MR5-0211	1503022-011
OU2-0-GW-T3W0375	1503250-003	OU3-0-GW-T1E0125	1503277-012	OU3-0-TL-MR6	1503022-012
OU2-0-GW-T3E0125	1503250-004	OU3-9-GW-RT-11	1503277-013	OU3-0-SO-MR6-0810	1503022-013
OU2-0-GW-P2-4	1503250-005				
OU2-9-GW-P2-4	1503250-006				
OU2-0-GW-T3E1125	1503250-007				

Sample type is denoted by a sample type code: 0 = normal samples and 9 = field duplicate

Sample media is denoted by a two character sample media code: SW = surface water, SO = soil, TL = tailings and GW = groundwater.

5. DATA QUALIFIERS

Various qualifiers may be attached to certain analytical results data by either the laboratories conducting the analyses or by persons performing independent data validation. These qualifiers are used to provide additional information about the sample result and generally provide a modifier related to chemical identity and/or chemical concentration. Data qualifiers that accompany a quantitative result may reflect analytical deficiencies associated with more than one review criterion found in USEPA data validation guidance. The data qualifiers used for QA review and data validation to date are defined in the following table.

Table 2: Laboratory Data Qualifier Definitions

Data Qualifiers	
@	High RPD due to suspected sample non-homogeneity or matrix interference.
#	High RPD due to low analyte concentrations. In this range, high RPDs are expected.
^	Reissue of a previously generated report. The Lab Sample ID has been revised. Information herein supersedes that of previously issued reports
1	Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.
2	Analyte concentration is too high for accurate matrix spike recovery and/or RPD.
3	Matrix spike recoveries and/or high RPDs indicate suspected sample non-homogeneity. The method is in control as indicated by the LCS.

6. ANALYTICAL REVIEW

The analytical results are of good quality and acceptable for their use as qualified. The review of sample analytical results and qualifications are presented in the following sections with summary explanations of any sample analysis deficiencies that resulted in changes or additions to laboratory reported quantitative results and data qualifiers. Summary tables with validated analytical results are available upon request.

6.1 SAMPLE PRESERVATION AND HOLDING TIMES

The objective is to determine the validity of the analytical results based on the sample condition and the holding time of the sample from the date of collection to the date of analysis. Requirements are specified in the project quality assurance/sampling and analysis plan.

All specified requirements were met during the sampling event.

6.2 METHOD BLANKS

The objective of method blank analysis results assessment is to determine the existence and magnitude of contamination resulting from laboratory activities. No contaminants should be detected in laboratory blanks.

There were no reported contaminants in the laboratory method blanks.

6.3 LABORATORY CONTROL SAMPLES

The laboratory control sample (LCS) serves as a monitor of the overall performance of all sample preparation and analysis procedures and is analyzed for each analyte using the same sample preparations, analytical methods, and quality assurance/quality control (QA/QC) procedures as employed for the other samples. QC requirements are specified in the project quality assurance/sampling and analysis plan. All LCS percent recoveries (%R) must fall within the control limits of 85-115%.

All reported LCS sample results are within control limits.

6.4 LABORATORY DUPLICATES

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. Samples identified as field blanks or performance evaluation (PE) samples cannot be used for duplicate sample analysis. A control limit of 20% for the relative percent difference (RPD) for original and duplicate sample values greater than or equal to five times (5x) the quantitation/reporting limit (QL). A control limit of +/-QL is used if either the sample or duplicate value is less than 5x the QL.

All reported RPD results are within control limits.

6.5 MATRIX SPIKE DUPLICATES

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. Non-homogenous samples can impact the apparent method recovery, although aqueous samples are generally homogenous. Samples identified as field blanks or performance evaluation (PE) samples cannot be used for spiked sample analysis. The spike percent recovery (%R) should be within the established acceptance limits. However, spike recovery limits do not apply when the sample concentration is greater than 4x the spike added. In such an event, the data are reported unflagged, even if the %R does not meet the acceptance criteria. Acceptance criteria are specified in the project quality assurance/sampling and analysis plan. All matrix spike sample percent recoveries (%R) must fall within the control limits of 70-130%. Matrix spike duplicate results pairs should fall within 20%.

A number of matrix spike results are reported outside recovery limits as noted in Table 3. Batches were accepted based on LCS recovery.

Table 3: Matrix Spike Results Reported Outside Recovery Limits

Laboratory Sample ID	MS/MSD Control Limit Deficient - Analyte (Defeciency)	Qualifier
1503022-001AMS/ 1503022-001AMSD	Antimony (low MSD %R)	1
	Copper (low MSD %R)	
	Aluminum (high MS/MSD %R)	2
	Iron (high MS/MSD %R)	
	Lead (low MS/MSD %R)	
	Magnesium (high MS/MSD %R)	
	Manganese (low MS/MSD %R)	
	Potassium (low MS/ high MSD %R)	
	Vanadium (high MSD %R)	3
	Zinc (low MS/MSD %R)	
1503130-001BMS/1503130-001BMSD	Calcium (low MSD %R)	2
	Sodium (low MSD %R)	
1503130-001CMS NO3/1503130-001CMSD NO3	Nitrite (high MSD %R)	1
1503164-001AMS/1503164-001AMSD	Calcium (low MS/MSD %R)	2
	Iron (low MS/MSD %R)	
	Manganese (low MS/MSD %R)	
	Zinc (low MS/MSD %R)	
1503165-001CMS NO3/1503165-001CMSD NO3	Nitrite (high MS/MSD %R)	1(MS), 1@(MSD)
1503199-001BMS/1503199-001BMSD	Calcium (high MS/MSD %R)	2
	Sodium (high MS/MSD %R)	
1503199-001AMS/1503199-001AMSD	Sodium (low MSD %R)	2
1503199-001DMS/1503199-001DMSD	Phosphate (high MSD %R)	1(MS), 1@(MSD)
1503250-001BMS/1503250-001BMSD	Calcium (high MS/MSD %R)	1
	Magnesium (high MS/MSD %R)	
	Sodium (high MS/MSD %R)	
1503250-001AMS/1503250-001AMSD	Calcium (high MS/MSD %R)	1
	Magnesium (high MSD %R)	
	Sodium (high MS/MSD %R)	
1503251-001CMS NO3/1503251-001CMSD NO3	Nitrite (low MSD %R)	1
1503251-001DMS/1503251-001DMSD	Phosphate (high MSD %R)	1@
1503251-004DMS/1503251-004DMSD	Phosphate (high MS/MSD %R)	1
1503277-001BMS/1503277-001BMSD	Calcium (low MS/MSD %R)	2
	Sodium (low MS/MSD %R)	
1503277-013BMS/1503277-013BMSD	Calcium (high MS/MSD %R)	2
	Magnesium (high MS/MSD %R)	
	Sodium (high MS/MSD %R)	
1503277-001AMS/1503277-001AMSD	Sodium (low MSD %R)	2
1503277-011CMS/1503277-011CMSD	Nitrite (low MSD %R)	1

6.6 FIELD DUPLICATES

Eight field duplicate sample pairs were analyzed by the laboratory. All duplicate recoveries were within acceptable ranges. Sample results and relative percent differences (RPD) are presented in the tables below.

Table 4: Field Duplicate Sample Results and RPDs for OU2-SW-SCI80

Analyte	PQL	Sample Identification: OU2-0-SW-SCI80 (1503130-001)	Sample Identification: OU2-9-SW-SCI80 (1503130-004)	RPD (%) *	
Aluminum (Total)	100	U	U	---	
Antimony (Total)	2	11	10.6	4%	a
Arsenic (Total)	2	10.3	7.73	29%	a
Barium (Total)	2	63	61.6	2%	a
Beryllium (Total)	2	U	U	---	
Cadmium (Total)	0.5	4.64	4.44	4%	a
Calcium (Total)	10000	138000	140000	1%	a
Chromium (Total)	2	U	U	---	
Cobalt (Total)	4	U	U	---	
Copper (Total)	2	8.74	8.12	7%	a
Iron (Total)	100	339	331	2%	a
Lead (Total)	2	57.9	54.9	5%	a
Magnesium (Total)	1000	33700	33700	0%	a
Manganese (Total)	2	286	282	1%	a
Mercury (Total)	0.15	U	U	---	
Nickel (Total)	2	U	U	---	
Potassium (Total)	1000	5660	5690	1%	a
Selenium (Total)	2	U	U	---	
Silver (Total)	2	U	U	---	
Sodium (Total)	10000	164000	168000	2%	a
Thallium (Total)	2	U	U	---	
Vanadium (Total)	5	U	U	---	
Zinc (Total)	10	1730	1740	1%	a
Aluminum (Dissolved)	100	U	U	---	
Antimony (Dissolved)	2	9.61	9.55	1%	a
Arsenic (Dissolved)	2	7.06	6.81	4%	a
Barium (Dissolved)	2	62.6	62.6	0%	a
Beryllium (Dissolved)	2	U	U	---	
Cadmium (Dissolved)	0.5	3.58	3.63	1%	a
Calcium (Dissolved)	10000	141000	140000	1%	a
Chromium (Dissolved)	2	U	U	---	
Cobalt (Dissolved)	4	U	U	---	
Copper (Dissolved)	2	2.76	2.56	8%	a
Iron (Dissolved)	100	U	U	---	
Lead (Dissolved)	2	U	U	---	
Magnesium (Dissolved)	1000	34100	33700	1%	a
Manganese (Dissolved)	2	265	263	1%	a
Mercury (Dissolved)	0.15	U	U	---	
Nickel (Dissolved)	2	U	U	---	
Potassium (Dissolved)	1000	6140	5950	3%	a
Selenium (Dissolved)	2	U	U	---	
Silver (Dissolved)	2	U	U	---	
Sodium (Dissolved)	10000	15400	15200	1%	a
Thallium (Dissolved)	2	U	U	---	
Vanadium (Dissolved)	5	U	U	---	
Zinc (Dissolved)	10	1730	1690	2%	a
Alkalinity (as CaCO3)	10000	167000	162000	3%	a
Chloride	10000	330000	331000	0%	a
Hardness (as CaCO3)	10000	483000	488000	1%	a
Nitrate (as N)	100	4760	4650	2%	a
Phosphate, Total (as P)	50	352	342	3%	a
Sulfate	75000	182000	163000	11%	a
Total Dissolved Solids	20000	1080000	1030000	5%	a
Total Suspended Solids	3000	4800	3600	29%	a

a: Acceptable field duplicate - sample results >= 5X the PQL have <=35% RPD or sample results are within +/- 5X the PQL.

U: Compound was not detected.

ug/L: micrograms per liter [all values in ug/L]

PQL: Practical Quantitation limit.

* RPD= | S-D |x 100 / (S+D) / 2.

Table 5: Field Duplicate Sample Results and RPDs for OU2-SW-SCWWT

Analyte	PQL	Sample Identificiation OU2-0-SW-SCWWT (1503165-001)	OU2-9-SW-SCWWT (1503165-002)	RPD (%) *	
Aluminum (Total)	100	131	164	22%	a
Antimony (Total)	2	2.21	2.32	5%	a
Arsenic (Total)	2	3.5	3.84	9%	a
Barium (Total)	2	64.6	64.3	0%	a
Beryllium (Total)	2	U	U	---	
Cadmium (Total)	0.5	0.85	0.861	1%	a
Calcium (Total)	10000	114000	113000	1%	a
Chromium (Total)	2	U	U	---	
Cobalt (Total)	4	U	U	---	
Copper (Total)	2	14.4	14.4	0%	a
Iron (Total)	100	137	117	16%	a
Lead (Total)	2	26.7	25.3	5%	a
Magnesium (Total)	1000	29400	29400	0%	a
Manganese (Total)	2	58.2	55.8	4%	a
Mercury (Total)	0.15	U	U	---	
Nickel (Total)	2	U	U	---	
Potassium (Total)	1000	15100	15000	1%	a
Selenium (Total)	2	U	U	---	
Silver (Total)	2	U	U	---	
Sodium (Total)	10000	214000	213000	0%	a
Thallium (Total)	2	U	U	---	
Vanadium (Total)	5	U	U	---	
Zinc (Total)	100	316	314	1%	a
Aluminum (Dissolved)	100	U	U	---	
Antimony (Dissolved)	2	U	U	---	
Arsenic (Dissolved)	2	2.52	2.81	11%	a
Barium (Dissolved)	2	58.8	61.4	4%	a
Beryllium (Dissolved)	2	U	U	---	
Cadmium (Dissolved)	0.5	0.595	0.619	4%	a
Calcium (Dissolved)	10000	115000	117000	2%	a
Chromium (Dissolved)	2	U	U	---	
Cobalt (Dissolved)	4	U	U	---	
Copper (Dissolved)	2	7.21	8.27	14%	a
Iron (Dissolved)	100	U	U	---	
Lead (Dissolved)	2	6.01	6.33	5%	a
Magnesium (Dissolved)	1000	28700	28900	1%	a
Manganese (Dissolved)	2	46.7	48.8	4%	a
Mercury (Dissolved)	0.15	U	U	---	
Nickel (Dissolved)	2	U	U	---	
Potassium (Dissolved)	1000	14700	14900	1%	a
Selenium (Dissolved)	2	U	U	---	
Silver (Dissolved)	2	U	U	---	
Sodium (Dissolved)	10000	212000	215000	1%	a
Thallium (Dissolved)	2	U	U	---	
Vanadium (Dissolved)	5	U	U	---	
Zinc (Dissolved)	10	254	265	4%	a
Alkalinity (as CaCO3)	10000	123000	134000	9%	a
Chloride	10000	388000	396000	2%	a
Hardness (as CaCO3)	10000	405000	404000	0%	a
Nitrate (as N)	100	19400	21700	11%	a
Phosphate, Total (as P)	50	1590	1640	3%	a
Sulfate	75000	137000	145000	6%	a
Total Dissolved Solids	20000	1050000	1080000	3%	a
Total Suspended Solids	3000	13200	10800	20%	a

a: Acceptable field duplicate - sample results >= 5X the PQL have <=35% RPD or sample results are within +/- 5X the PQL.

U: Compound was not detected.

ug/L: micrograms per liter [all values in ug/L]

PQL: Practical Quantitation limit.

* RPD= | S-D |x 100 / (S+D) / 2.

Table 6: Field Duplicate Sample Results and RPDs for OU2-GW-P25

Analyte	PQL	Sample Identificiation		RPD (%) *	
		OU2-0-GW-P25 (1503164-001)	OU2-9-GW-P25 (1503164-002)		
Aluminum (Total)	100	U	U	---	
Antimony (Total)	2	278	275	1%	a
Arsenic (Total)	2	201	198	2%	a
Barium (Total)	2	112	109	3%	a
Beryllium (Total)	2	U	U	---	
Cadmium (Total)	0.5	12.4	12.3	1%	a
Calcium (Total)	10000	93200	89400	4%	a
Chromium (Total)	2	U	U	---	
Cobalt (Total)	4	U	U	---	
Copper (Total)	2	15.3	15.1	1%	a
Iron (Total)	100	8440	8340	1%	a
Lead (Total)	2	164	165	1%	a
Magnesium (Total)	1000	16800	16600	1%	a
Manganese (Total)	2	1790	1780	1%	a
Mercury (Total)	0.15	0.185	0.183	1%	a
Nickel (Total)	2	3.46	3.44	1%	a
Potassium (Total)	1000	2570	2610	2%	a
Selenium (Total)	2	U	U	---	
Silver (Total)	2	U	U	---	
Sodium (Total)	10000	19300	18500	4%	a
Thallium (Total)	2	U	U	---	---
Vanadium (Total)	5	U	U	---	
Zinc (Total)	100	8440	8610	2%	a
Aluminum (Dissolved)	100	U	U	---	
Antimony (Dissolved)	2	272	267	2%	a
Arsenic (Dissolved)	2	190	186	2%	a
Barium (Dissolved)	2	108	103	5%	a
Beryllium (Dissolved)	2	U	U	---	
Cadmium (Dissolved)	0.5	11.9	11.9	0%	a
Calcium (Dissolved)	10000	95400	92400	3%	a
Chromium (Dissolved)	2	U	U	---	
Cobalt (Dissolved)	4	U	U	---	
Copper (Dissolved)	2	10.6	10.7	1%	a
Iron (Dissolved)	100	8360	8180	2%	a
Lead (Dissolved)	2	118	120	2%	a
Magnesium (Dissolved)	1000	16600	16200	2%	a
Manganese (Dissolved)	2	1750	1700	3%	a
Mercury (Dissolved)	0.15	0.152	U	---	
Nickel (Dissolved)	2	3.62	3.3	9%	a
Potassium (Dissolved)	1000	252000	256000	2%	a
Selenium (Dissolved)	2	U	U	---	
Silver (Dissolved)	2	U	U	---	
Sodium (Dissolved)	10000	20000	19100	5%	a
Thallium (Dissolved)	2	U	U	---	
Vanadium (Dissolved)	5	U	U	---	
Zinc (Dissolved)	10	8530	8410	1%	a
Alkalinity (as CaCO3)	10000	159000	154000	3%	a
Chloride	10000	36000	35700	1%	a
Hardness (as CaCO3)	10000	302000	292000	3%	a
Nitrate (as N)	100	U	U	---	
Phosphate, Total (as P)	50	200	192	4%	a
Sulfate	75000	156000	157000	1%	a
Total Dissolved Solids	20000	444000	428000	4%	a
Total Suspended Solids	3000	18000	17600	2%	a

a: Acceptable field duplicate - sample results >= 5X the PQL have <=35% RPD or sample results are within +/- 5X the PQL.

U: Compound was not detected.

ug/L: micrograms per liter [all values in ug/L]

PQL: Practical Quantitation limit.

* RPD= | S-D |x 100 / (S+D) / 2.

Table 7: Field Duplicate Sample Results and RPDs for OU3-SW-SCOU3BC

Analyte	PQL	Sample Identificiation		RPD (%) *	
		OU3-0-SW-SCOU3BC (1503199-003)	OU3-9-SW-SCOU3BC (1503199-005)		
Aluminum (Total)	100	U	U	---	
Antimony (Total)	2	5.99	5.63	6%	a
Arsenic (Total)	2	7.49	4.34	53%	a
Barium (Total)	2	63.3	61.9	2%	a
Beryllium (Total)	2	U	U	---	
Cadmium (Total)	0.5	7.32	7.22	1%	a
Calcium (Total)	10000	200000	204000	2%	a
Chromium (Total)	2	U	U	---	
Cobalt (Total)	4	U	U	---	
Copper (Total)	2	7.24	5.43	29%	a
Iron (Total)	100	873	470	60%	a
Lead (Total)	2	27.8	13.5	69%	a
Magnesium (Total)	1000	53700	53700	0%	a
Manganese (Total)	2	241	240	0%	a
Mercury (Total)	0.15	U	U	---	
Nickel (Total)	2	2.98	2.99	0%	a
Potassium (Total)	1000	4440	4410	1%	a
Selenium (Total)	2	U	U	---	
Silver (Total)	2	U	U	---	
Sodium (Total)	10000	200000	205000	2%	a
Thallium (Total)	2	U	U	---	
Vanadium (Total)	5	U	U	---	
Zinc (Total)	100	2000	1930	4%	a
Aluminum (Dissolved)	100	U	U	---	
Antimony (Dissolved)	2	5.71	5.73	0%	a
Arsenic (Dissolved)	2	2.04	U	---	
Barium (Dissolved)	2	59	58.9	0%	a
Beryllium (Dissolved)	2	U	U	---	
Cadmium (Dissolved)	0.5	6.76	6.73	0%	a
Calcium (Dissolved)	10000	199000	210000	5%	a
Chromium (Dissolved)	2	U	3.01	---	
Cobalt (Dissolved)	4	U	U	---	
Copper (Dissolved)	2	2.91	2.95	1%	a
Iron (Dissolved)	100	U	U	---	
Lead (Dissolved)	2	U	U	---	
Magnesium (Dissolved)	1000	52200	52200	0%	a
Manganese (Dissolved)	2	211	212	0%	a
Mercury (Dissolved)	0.15	U	U	---	
Nickel (Dissolved)	2	2.73	3.66	29%	a
Potassium (Dissolved)	1000	4240	4230	0%	a
Selenium (Dissolved)	2	U	U	---	
Silver (Dissolved)	2	U	U	---	
Sodium (Dissolved)	10000	210000	213000	1%	a
Thallium (Dissolved)	2	U	U	---	
Vanadium (Dissolved)	5	U	U	---	
Zinc (Dissolved)	10	1930	1930	0%	a
Alkalinity (as CaCO3)	10000	183000	202000	10%	a
Chloride	10000	482000	501000	4%	a
Hardness (as CaCO3)	10000	721000	731000	1%	a
Nitrate (as N)	100	U	U	---	
Phosphate, Total (as P)	50	U	U	---	
Sulfate	75000	221000	227000	3%	a
Total Dissolved Solids	20000	1250000	1360000	8%	a
Total Suspended Solids	3000	U	U	---	

a: Acceptable field duplicate - sample results >= 5X the PQL have <=35% RPD or sample results are within +/- 5X the PQL.

U: Compound was not detected.

ug/L: micrograms per liter [all values in ug/L]

PQL: Practical Quantitation limit.

*RPD= | S-D |x 100 / (S+D) / 2.

Table 8: Field Duplicate Sample Results and RPDs for OU2-GW-P2-2(A)

Analyte	PQL	Sample Identificiation		RPD (%) *	
		OU2-0-GW-P2-2(A) (1503200-003)	OU2-9-GW-P2-2(A) (1503200-004)		
Aluminum (Total)	100	U	U	---	
Antimony (Total)	2	U	U	---	
Arsenic (Total)	2	2.55	2.67	5%	a
Barium (Total)	2	244	255	4%	a
Beryllium (Total)	2	U	U	---	
Cadmium (Total)	0.5	U	U	---	
Calcium (Total)	10000	244000	251000	3%	a
Chromium (Total)	2	U	U	---	
Cobalt (Total)	4	U	U	---	
Copper (Total)	2	U	U	---	
Iron (Total)	100	681	708	4%	a
Lead (Total)	2	7.84	6.7	16%	a
Magnesium (Total)	1000	68500	70100	2%	a
Manganese (Total)	2	2070	2080	0%	a
Mercury (Total)	0.15	U	U	---	
Nickel (Total)	2	U	U	---	
Potassium (Total)	1000	3680	3790	3%	a
Selenium (Total)	2	U	U	---	
Silver (Total)	2	U	U	---	
Sodium (Total)	10000	61700	63300	3%	a
Thallium (Total)	2	U	U	---	
Vanadium (Total)	5	U	U	---	
Zinc (Total)	100	531	517	3%	a
Aluminum (Dissolved)	100	U	U	---	
Antimony (Dissolved)	2	U	U	---	
Arsenic (Dissolved)	2	2.25	2	12%	a
Barium (Dissolved)	2	262	257	2%	a
Beryllium (Dissolved)	2	U	U	---	
Cadmium (Dissolved)	0.5	U	U	---	
Calcium (Dissolved)	10000	252000	249000	1%	a
Chromium (Dissolved)	2	U	U	---	
Cobalt (Dissolved)	4	U	U	---	
Copper (Dissolved)	2	13	U	---	
Iron (Dissolved)	100	614	619	1%	a
Lead (Dissolved)	2	3.87	4.04	4%	a
Magnesium (Dissolved)	1000	70100	68700	2%	a
Manganese (Dissolved)	2	2100	2070	1%	a
Mercury (Dissolved)	0.15	U	U	---	
Nickel (Dissolved)	2	U	U	---	
Potassium (Dissolved)	1000	3760	3700	2%	a
Selenium (Dissolved)	2	U	U	---	
Silver (Dissolved)	2	U	U	---	
Sodium (Dissolved)	10000	65600	64600	2%	a
Thallium (Dissolved)	2	U	U	---	
Vanadium (Dissolved)	5	U	U	---	
Zinc (Dissolved)	10	441	433	2%	a
Alkalinity (as CaCO3)	10000	274000	276000	1%	a
Chloride	10000	179000	181000	1%	a
Hardness (as CaCO3)	10000	892000	916000	3%	a
Nitrate (as N)	100	U	U	---	
Phosphate, Total (as P)	50	250	328	27%	a
Sulfate	75000	415000	421000	1%	a
Total Dissolved Solids	20000	1170000	1120000	4%	a
Total Suspended Solids	3000	U	U	---	

a: Acceptable field duplicate - sample results >= 5X the PQL have <=35% RPD or sample results are within +/- 5X the PQL.

U: Compound was not detected.

ug/L: micrograms per liter [all values in ug/L]

PQL: Practical Quantitation limit.

* RPD= | S-D |x 100 / (S+D) / 2.

Table 9: Field Duplicate Sample Results and RPDs for OU3-SW-SC248BC

Analyte	PQL	Sample Identificiation		RPD (%) *	
		OU3-0-SW-SC248BC (1503251-002)	OU3-9-SW-SC248BC (1503251-003)		
Aluminum (Total)	100	U	U	---	
Calcium (Total)	2	162000	158000	3%	a
Iron (Total)	2	466	470	1%	a
Magnesium (Total)	2	38300	37800	1%	a
Potassium (Total)	2	2650	2620	1%	a
Sodium (Total)	0.5	115000	112000	3%	a
Vanadium (Total)	10000	U	U	---	
Zinc (Total)	2	427	422	1%	a
Antimony (Total)	4	5.69	5.27	8%	a
Arsenic (Total)	2	6.98	6.58	6%	a
Barium (Total)	100	42.3	39.1	8%	a
Beryllium (Total)	2	U	U	---	
Cadmium (Total)	1000	1.06	0.982	8%	a
Chromium (Total)	2	U	U	---	
Cobalt (Total)	0.15	U	U	---	
Copper (Total)	2	2.21	2.32	5%	a
Lead (Total)	1000	24.8	24	3%	a
Manganese (Total)	2	581	543	7%	a
Nickel (Total)	2	U	U	---	
Selenium (Total)	10000	U	U	---	
Silver (Total)	2	U	U	---	
Thallium (Total)	5	U	U	---	
Hardness (as CaCO3)	100	563000	550000	2%	a
Mercury (Total)	100	U	U	---	
Aluminum (Dissolved)	2	U	U	---	
Calcium (Dissolved)	2	162000	156000	4%	a
Iron (Dissolved)	2	U	U	---	
Magnesium (Dissolved)	2	37300	37200	0%	a
Potassium (Dissolved)	0.5	2560	2570	0%	a
Sodium (Dissolved)	10000	114000	110000	4%	a
Vanadium (Dissolved)	2	U	U	---	
Zinc (Dissolved)	4	367	363	1%	a
Antimony (Dissolved)	2	4.99	5.08	2%	a
Arsenic (Dissolved)	100	4.16	4.4	6%	a
Barium (Dissolved)	2	38.9	38.3	2%	a
Beryllium (Dissolved)	1000	U	U	---	
Cadmium (Dissolved)	2	U	U	---	
Chromium (Dissolved)	0.15	U	U	---	
Cobalt (Dissolved)	2	U	U	---	
Copper (Dissolved)	1000	U	U	---	
Lead (Dissolved)	2	U	U	---	
Manganese (Dissolved)	2	497	480	3%	a
Nickel (Dissolved)	10000	U	U	---	
Selenium (Dissolved)	2	U	U	---	
Silver (Dissolved)	5	U	U	---	
Thallium (Dissolved)	10	U	U	---	
Mercury (Dissolved)	10000	U	U	---	
Chloride	10000	222000	226000	2%	a
Sulfate	10000	267000	267000	0%	a
Alkalinity (as CaCO3)	100	159000	163000	2%	a
Nitrate (as N)	50	59	61.8	5%	a
Total Dissolved Solids	75000	964000	864000	11%	a
Total Suspended Solids	20000	U	4000	---	
Phosphate, Total (as P)	3000	58.9	U	---	

a: Acceptable field duplicate - sample results >= 5X the PQL have <=35% RPD or sample results are within +/- 5X the PQL.

U: Compound was not detected.

ug/L: micrograms per liter [all values in ug/L]

PQL: Practical Quantitation limit.

*RPD= | S-D |x 100 / (S+D) / 2.

Table 10: Field Duplicate Sample Results and RPDs for OU2-GW-P2-4

Analyte	PQL	Sample Identificiation		RPD (%) *	
		OU2-0-GW-P2-4 (1503250-005)	OU2-9-GW-P2-4 (1503250-006)		
Aluminum (Total)	100	445	383	15%	a
Antimony (Total)	2	U	U	---	
Arsenic (Total)	2	31.3	30.5	3%	a
Barium (Total)	2	47.7	45.4	5%	a
Beryllium (Total)	2	U	U	---	
Cadmium (Total)	0.5	U	U	---	
Calcium (Total)	10000	569000	567000	0%	a
Chromium (Total)	2	U	U	---	
Cobalt (Total)	4	31.2	30	4%	a
Copper (Total)	2	U	U	---	
Iron (Total)	100	14100	13900	1%	a
Lead (Total)	2	6.23	4.45	33%	a
Magnesium (Total)	1000	146000	144000	1%	a
Manganese (Total)	2	9290	8670	7%	a
Mercury (Total)	0.15	U	U	---	
Nickel (Total)	2	22.6	21.8	4%	a
Potassium (Total)	1000	5170	5110	1%	a
Selenium (Total)	2	U	U	---	
Silver (Total)	2	U	U	---	
Sodium (Total)	10000	147000	146000	1%	a
Thallium (Total)	2	U	U	---	
Vanadium (Total)	5	U	U	---	
Zinc (Total)	100	7790	7720	1%	a
Aluminum (Dissolved)	100	U	U	---	
Antimony (Dissolved)	2	U	U	---	
Arsenic (Dissolved)	2	29.6	29.5	0%	a
Barium (Dissolved)	2	41.5	40.9	1%	a
Beryllium (Dissolved)	2	U	U	---	
Cadmium (Dissolved)	0.5	U	U	---	
Calcium (Dissolved)	10000	574000	565000	2%	a
Chromium (Dissolved)	2	U	U	---	
Cobalt (Dissolved)	4	31.5	31.3	1%	a
Copper (Dissolved)	2	U	U	---	
Iron (Dissolved)	100	13300	13000	2%	a
Lead (Dissolved)	2	U	U	---	
Magnesium (Dissolved)	1000	156000	144000	8%	a
Manganese (Dissolved)	2	8970	8810	2%	a
Mercury (Dissolved)	0.15	U	U	---	
Nickel (Dissolved)	2	22.4	22.3	0%	a
Potassium (Dissolved)	1000	5110	4970	3%	a
Selenium (Dissolved)	2	U	U	---	
Silver (Dissolved)	2	U	U	---	
Sodium (Dissolved)	10000	150000	145000	3%	a
Thallium (Dissolved)	2	U	U	---	
Vanadium (Dissolved)	5	U	U	---	
Zinc (Dissolved)	10	7690	7580	1%	a
Alkalinity (as CaCO3)	10000	98500	96700	2%	a
Chloride	10000	852000	861000	1%	a
Hardness (as CaCO3)	10000	2020000	2010000	0%	a
Nitrate (as N)	100	U	U	---	
Phosphate, Total (as P)	50	201	197	2%	a
Sulfate	75000	1030000	1060000	3%	a
Total Dissolved Solids	20000	3110000	3000000	4%	a
Total Suspended Solids	3000	5600	7600	30%	a

a: Acceptable field duplicate - sample results >= 5X the PQL have <=35% RPD or sample results are within +/- 5X the PQL.

U: Compound was not detected.

ug/L: micrograms per liter [all values in ug/L]

PQL: Practical Quantitation limit.

* RPD= | S-D |x 100 / (S+D) / 2.

Table 11: Field Duplicate Sample Results and RPDs for OU3-SW-SCBOU4

Analyte	PQL	Sample Identificiation OU3-0-SW-SCBOU4 1503277-001	OU3-9-SW-SCBOU4 1503277-002	RPD (%) *	
Aluminum (Total)	100	117	121	3%	a
Antimony (Total)	2	4.65	4.5	3%	a
Arsenic (Total)	2	3.15	2.89	9%	a
Barium (Total)	2	36.7	36.6	0%	a
Beryllium (Total)	2	U	U	---	
Cadmium (Total)	0.5	4.88	4.76	2%	a
Calcium (Total)	10000	95000	94700	0%	a
Chromium (Total)	2	U	U	---	
Cobalt (Total)	4	U	U	---	
Copper (Total)	2	5.48	5.2	5%	a
Iron (Total)	100	220	218	1%	a
Lead (Total)	2	10	9.78	2%	a
Magnesium (Total)	1000	16900	16700	1%	a
Manganese (Total)	2	123	119	3%	a
Mercury (Total)	0.15	U	U	---	
Nickel (Total)	2	2.34	2.41	3%	a
Potassium (Total)	1000	2730	2760	1%	a
Selenium (Total)	2	U	U	---	
Silver (Total)	2	U	U	---	
Sodium (Total)	10000	144000	142000	1%	a
Thallium (Total)	2	U	U	---	
Vanadium (Total)	5	U	U	---	
Zinc (Total)	100	1130	1130	0%	a
Aluminum (Dissolved)	100	U	U	---	
Antimony (Dissolved)	2	4.5	4.47	1%	a
Arsenic (Dissolved)	2	U	U	---	
Barium (Dissolved)	2	35.5	35.2	1%	a
Beryllium (Dissolved)	2	U	U	---	
Cadmium (Dissolved)	0.5	1.6	1.52	5%	a
Calcium (Dissolved)	10000	102000	98100	4%	a
Chromium (Dissolved)	2	U	U	---	
Cobalt (Dissolved)	4	U	U	---	
Copper (Dissolved)	2	U	U	---	
Iron (Dissolved)	100	U	U	---	
Lead (Dissolved)	2	U	U	---	
Magnesium (Dissolved)	1000	17200	16600	4%	a
Manganese (Dissolved)	2	118	119	1%	a
Mercury (Dissolved)	0.15	U	U	---	
Nickel (Dissolved)	2	2.34	2.16	8%	a
Potassium (Dissolved)	1000	2770	2720	2%	a
Selenium (Dissolved)	2	U	U	---	
Silver (Dissolved)	2	U	U	---	
Sodium (Dissolved)	10000	155000	152000	2%	a
Thallium (Dissolved)	2	U	U	---	
Vanadium (Dissolved)	5	U	U	---	
Zinc (Dissolved)	10	945	944	0%	a
Alkalinity (as CaCO3)	10000	116000	115000	1%	a
Chloride	10000	237000	243000	3%	a
Hardness (as CaCO3)	10000	307000	305000	1%	a
Nitrate (as N)	100	92.7	101	9%	a
Phosphate, Total (as P)	50	U	U	---	
Sulfate	75000	154000	160000	4%	a
Total Dissolved Solids	20000	664000	700000	5%	a
Total Suspended Solids	3000	10800	4400	84%	a

a: Acceptable field duplicate - sample results >= 5X the PQL have <=35% RPD or sample results are within +/- 5X the PQL.

U: Compound was not detected.

ug/L: micrograms per liter [all values in ug/L]

PQL: Practical Quantitation limit.

* RPD= | S-D |x 100 / (S+D) / 2.

Table 12: Field Duplicate Sample Results and RPDs for OU3-GW-RT-11

Analyte	PQL	Sample Identificiation		RPD (%) *	
		OU3-0-GW-RT-11 1503277-009	OU3-9-GW-RT-11 1503277-013		
Aluminum (Total)	100	U	U	---	
Antimony (Total)	2	14.5	15.6	7%	a
Arsenic (Total)	2	4.52	4.22	7%	a
Barium (Total)	2	52.5	57.1	8%	a
Beryllium (Total)	2	U	U	---	
Cadmium (Total)	0.5	120	130	8%	a
Calcium (Total)	10000	234000	229000	2%	a
Chromium (Total)	2	U	U	---	
Cobalt (Total)	4	U	U	---	
Copper (Total)	2	19.2	19.8	3%	a
Iron (Total)	100	U	U	---	
Lead (Total)	2	301	330	9%	a
Magnesium (Total)	1000	52400	47300	10%	a
Manganese (Total)	2	79.2	77.2	3%	a
Mercury (Total)	0.15	U	U	---	
Nickel (Total)	2	2.55	2.58	1%	a
Potassium (Total)	1000	2660	2640	1%	a
Selenium (Total)	2	3.45	3.5	1%	a
Silver (Total)	2	U	U	---	
Sodium (Total)	10000	132000	129000	2%	a
Thallium (Total)	2	U	U	---	
Vanadium (Total)	5	U	U	---	
Zinc (Total)	100	9210	9170	0%	a
Aluminum (Dissolved)	100	U	U	---	
Antimony (Dissolved)	2	13.8	14.1	2%	a
Arsenic (Dissolved)	2	4	4.33	8%	a
Barium (Dissolved)	2	50.4	51.9	3%	a
Beryllium (Dissolved)	2	U	U	---	
Cadmium (Dissolved)	0.5	116	120	3%	a
Calcium (Dissolved)	10000	221000	229000	4%	a
Chromium (Dissolved)	2	U	U	---	
Cobalt (Dissolved)	4	U	U	---	
Copper (Dissolved)	2	19.1	19.7	3%	a
Iron (Dissolved)	100	U	U	---	
Lead (Dissolved)	2	290	300	3%	a
Magnesium (Dissolved)	1000	51600	48100	7%	a
Manganese (Dissolved)	2	73.7	78.1	6%	a
Mercury (Dissolved)	0.15	U	U	---	
Nickel (Dissolved)	2	2.31	2.47	7%	a
Potassium (Dissolved)	1000	2590	2630	2%	a
Selenium (Dissolved)	2	3.27	3.35	2%	a
Silver (Dissolved)	2	U	U	---	
Sodium (Dissolved)	10000	127000	131000	3%	a
Thallium (Dissolved)	2	U	U	---	
Vanadium (Dissolved)	5	U	U	---	
Zinc (Dissolved)	10	8400	8340	1%	a
Alkalinity (as CaCO3)	10000	190000	193000	2%	a
Chloride	10000	369000	371000	1%	a
Hardness (as CaCO3)	10000	800000	767000	4%	a
Nitrate (as N)	100	104	98.9	5%	a
Phosphate, Total (as P)	50	U	U	---	
Sulfate	75000	357000	393000	10%	a
Total Dissolved Solids	20000	1250000	1350000	8%	a
Total Suspended Solids	3000	U	U	---	

a: Acceptable field duplicate - sample results >= 5X the PQL have <=35% RPD or sample results are within +/- 5X the PQL.

U: Compound was not detected.

ug/L: micrograms per liter [all values in ug/L]

PQL: Practical Quantitation limit.

* RPD= | S-D |x 100 / (S+D) / 2.

Table 13: Field Duplicate Sample Results and RPDs for OU3-SO-MR4-1015

Analyte	PQL	Sample Identificiation		RPD (%) *	
		OU3-0-SO-MR4-1015	OU3-9-SO-MR4-1015		
		1503022-008	1503022-009		
Aluminum	10	20800	19900	4%	a
Calcium	10	9830	10000	2%	a
Iron	10	26700	27500	3%	a
Magnesium	10	12600	11900	6%	a
Potassium	1	468	409	13%	a
Sodium	1	210	208	1%	a
Vanadium	1	75.8	76.4	1%	a
Zinc	1	87.8	103	16%	a
Antimony	40	U	U	---	
Arsenic	40	2.87	2.55	12%	a
Barium	40	206	96.9	72%	
Beryllium	40	U	U	---	
Cadmium	40	U	U	---	
Chromium	40	33.8	34.7	3%	a
Cobalt	40	13.7	13.6	1%	a
Copper	40	22.1	20.9	6%	a
Lead	50	30.2	16	61%	a
Manganese	500	683	655	4%	a
Nickel	40	U	U	---	
Selenium	40	U	U	---	
Silver	40	U	U	---	
Thallium	50	U	U	---	
Mercury	1	U	U	---	
Percent Moisture	1	16.5	14.7	12%	a
Phosphate, (as P)	10	1570	1760	11%	a

a: Acceptable field duplicate - sample results >= 5X the PQL have <=35% RPD or sample results are within +/- 5X the PQL.
U: Compound was not detected.
mg/kg: milligrams per kilograms [all values in mg/kg]
PQL: Practical Quantitation limit.
* RPD= | S-D |x 100 / (S+D) / 2.

6.7 FIELD EQUIPMENT BLANKS

No field blanks were collected. All samples were collected using disposable sampling equipment. Decontamination and rinsate blanks were not required.

4. CONCLUSION

The results of the quality assurance review indicate that the analytical data are of good quality and acceptable for their intended use.

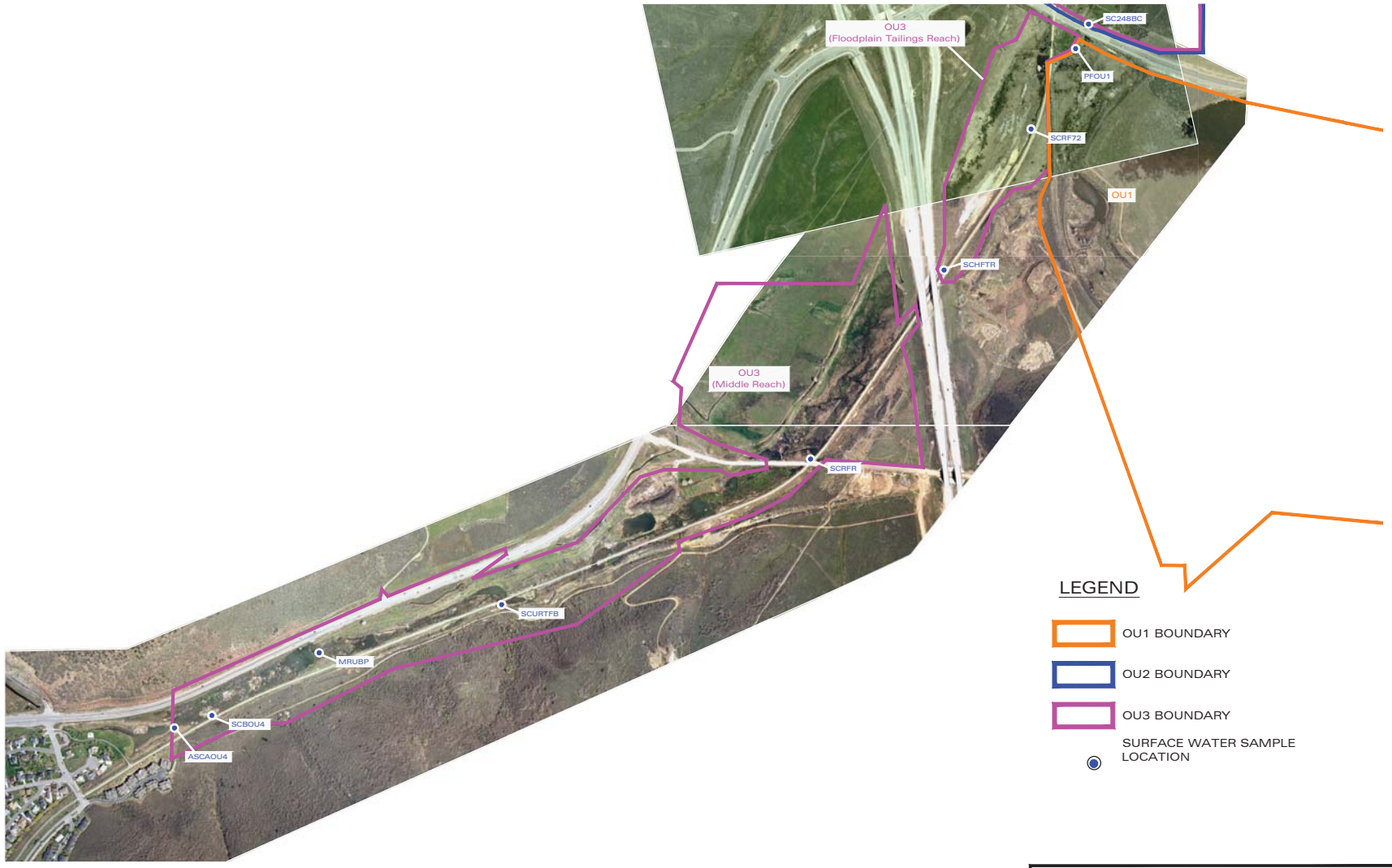
5. REFERENCES

Resource Management Consultants, Inc. (RMC). 2014. Sampling and Analysis Plan for Richardson Flat Tailings Site Operable Units 2 and 3. Comprised of the Field Sampling Plan, Quality Assurance Project Plan and Health and Safety Plan, Rev. 1, October 29, 2014.

USEPA. 2014. Approval of Sampling and Analysis Plan Pursuant to Administrative Order on Consent CERCLA 08-2014-003.

USEPA. 2010. Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review. EPA-540-R-10-011. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation (OSRTI), Washington D.C.

USEPA. 2006. Data Quality Assessment: A Reviewer's Guide EPA QA/G-9R Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review. EPA/240/B-06/002 February 2006. U.S. Environmental Protection Agency, Office of Environmental Information, Washington D.C.



SCALE
0 400 800
FEET

N

UNITED PARK CITY MINES

FIGURE 1-1 (SHEET 1 OF 4)

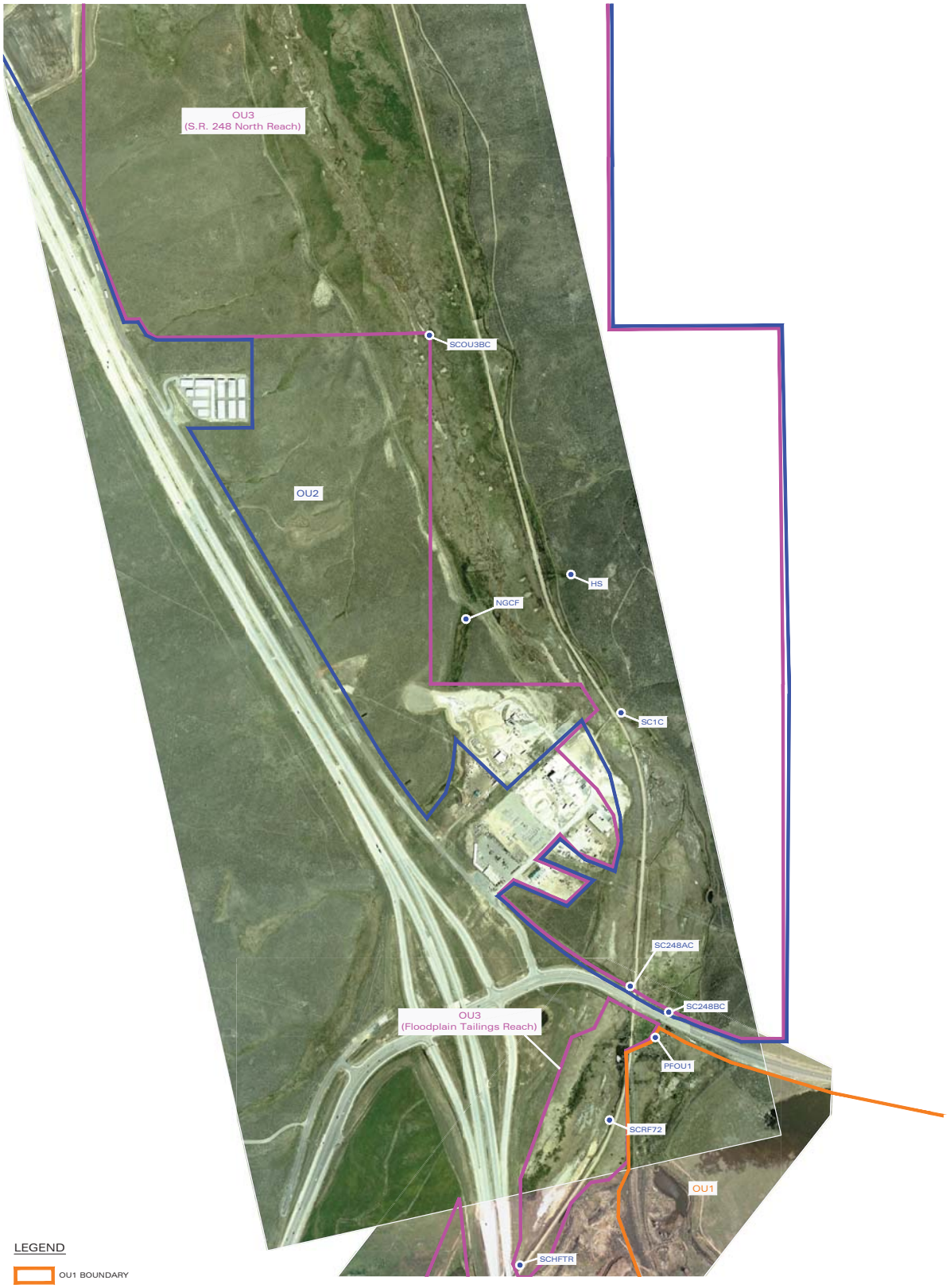
SURFACE WATER SAMPLE LOCATIONS

Resource and Environmental Management Consultants
8496 South Harrison Street
Suite 102
Midvale, Utah 84047
(801) 255-2626
REMC
Est. 1997
Midvale, Utah

MARCH 2015

OU23 locations march 2015-SW.dwg

Note: Locations and Operable Unit boundaries approximate.



LEGEND

- OU1 BOUNDARY
- OU2 BOUNDARY
- OU3 BOUNDARY
- SURFACE WATER SAMPLE LOCATION

SCALE
0 400 800
FEET

N

Note: Locations and Operable Unit boundaries approximate.

UNITED PARK CITY MINES

FIGURE 1-2 (SHEET 2 OF 4)
SURFACE WATER SAMPLE LOCATIONS

Resource and Environmental Management Consultants
8496 South Harrison Street
Suite 102
Midvale, Utah 84047
(801) 253-2626

REMC
Est. 1997
Midvale, Utah

MARCH 2015

OU23 locations march 2015-SW.dwg

LEGEND

- OU2 BOUNDARY
- OU3 BOUNDARY
- SURFACE WATER SAMPLE LOCATION

SCALE
0 400 800
FEET

Note: Locations and Operable Unit boundaries approximate.

UNITED PARK CITY MINES

FIGURE 1-3 (SHEET 3 OF 4)
SURFACE WATER SAMPLE LOCATIONS

Resource and Environmental Management Consultants
8496 South Harrison Street
Suite 102
Midvale, Utah 84047
(801) 255-2626
REMC
Est. 1997
Midvale, Utah

MARCH 2015

OU23 locations march 2015-SW.dwg

LEGEND

- OU2 BOUNDARY
- OU3 BOUNDARY
- SURFACE WATER SAMPLE LOCATION

SCALE
0 400 800
FEET

N

UNITED PARK CITY MINES

FIGURE 1-4 (SHEET 4 OF 4)
SURFACE WATER SAMPLE LOCATIONS

Resource and Environmental Management Consultants
8496 South Harrison Street
Suite 102
Midvale, Utah 84047
(801) 255-2626
REMC
Est. 1997
Midvale, Utah

MARCH 2015

OU23 locations march 2015–SW.dwg

LEGEND

- OU1 BOUNDARY
- OU2 BOUNDARY
- OU3 BOUNDARY
- Groundwater Sampling Location

SCALE
0 400 800
FEET

N

UNITED PARK CITY MINES

FIGURE 2-1 (SHEET 1 OF 4)
GROUNDWATER SAMPLE LOCATIONS

Resource and Environmental Management Consultants
8496 South Harrison Street
Suite 102
Midvale, Utah 84047
(801) 255-2626

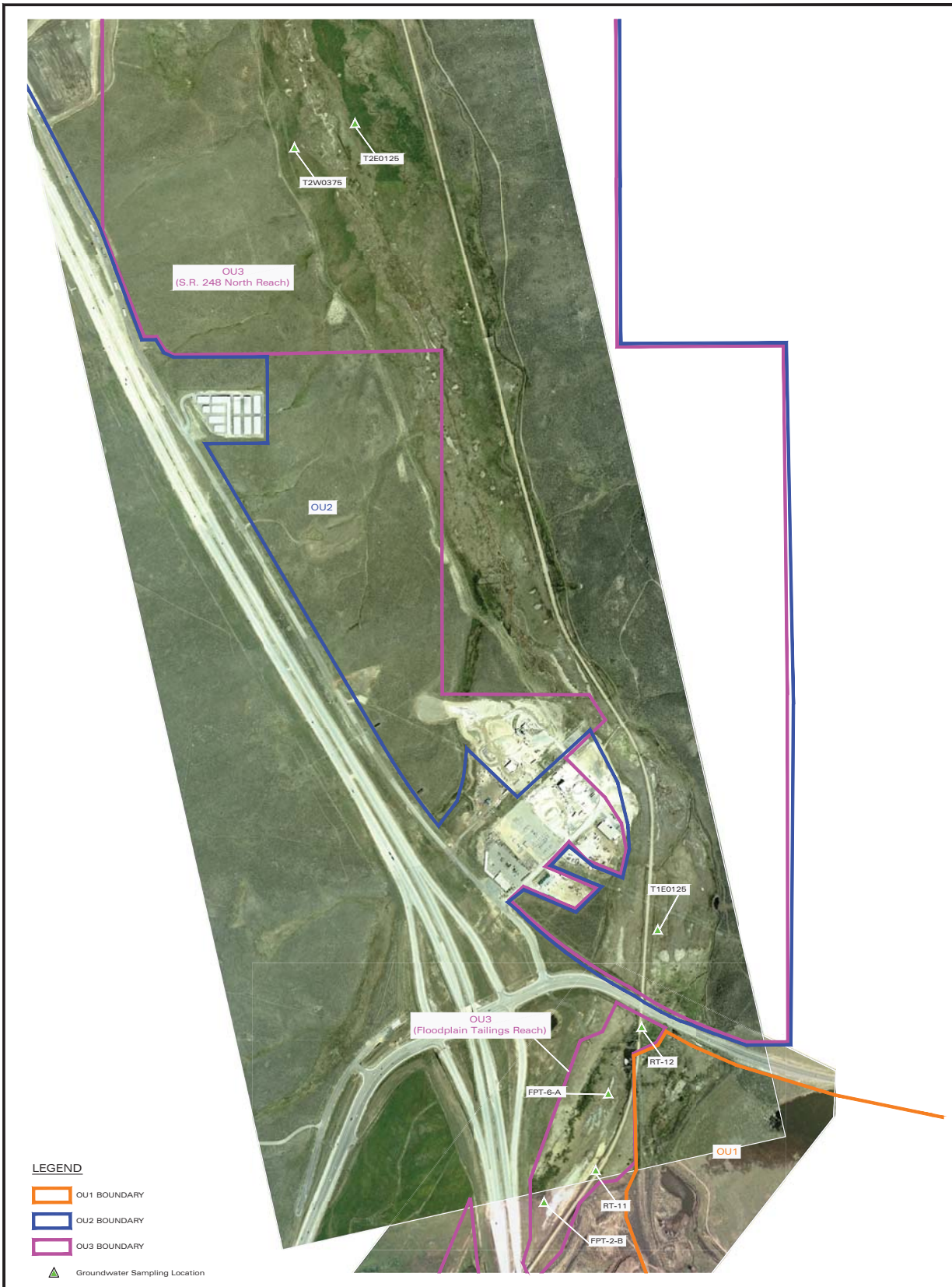
REMC
Est. 1997
Midvale, Utah

MARCH 2015

OU23 locations march 2015-GW.dwg

Note: Locations and Operable Unit boundaries approximate.

Locations of proposed Middle Reach piezometers may be modified based on field conditions or EPA input.



Note: Locations and Operable Unit boundaries approximate.

UNITED PARK CITY MINES

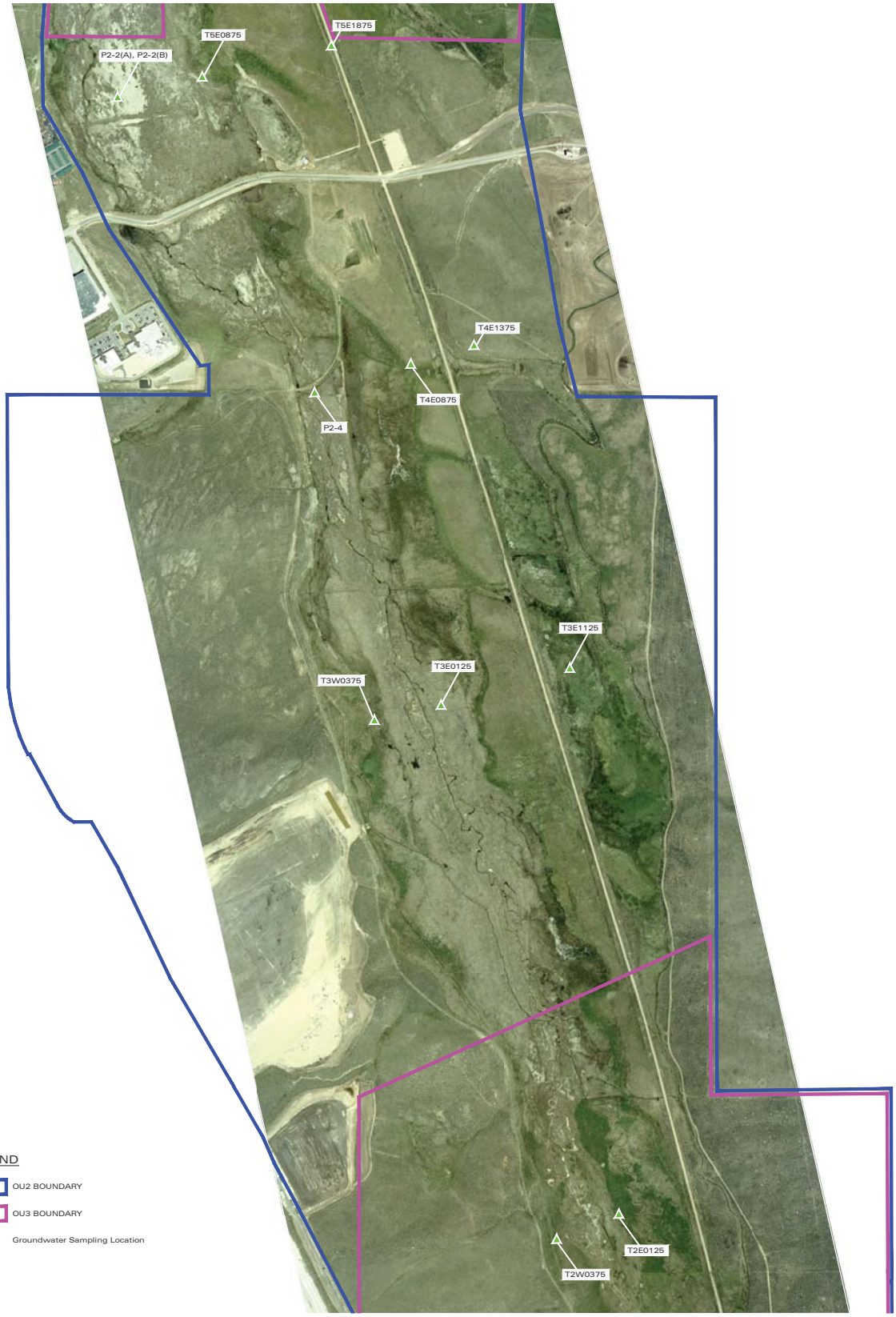
FIGURE 2-2 (SHEET 2 OF 4)

GROUNDWATER SAMPLE LOCATIONS

Resource and Environmental Management Consultants
8496 South Harrison Street
Suite 102
Midvale, Utah 84047
(801) 255-2626
REMC
Est. 1997
Midvale, Utah

MARCH 2015

OU23 locations march 2015-GW.dwg



Note: Locations and Operable Unit boundaries approximate.

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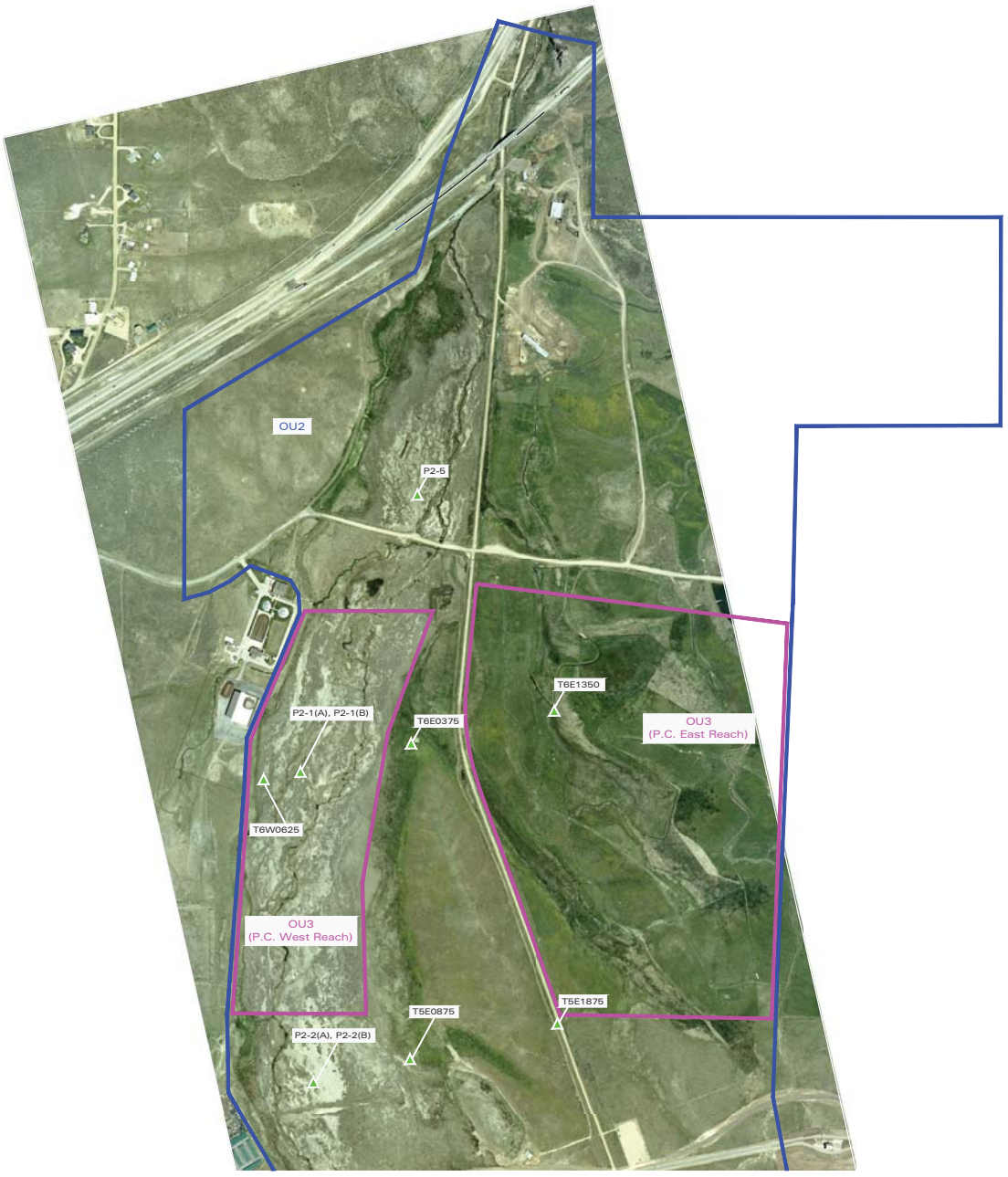
FIGURE 2-3 (SHEET 3 OF 4)

GROUNDWATER SAMPLE LOCATIONS

Resource and Environmental Management Consultants
8496 South Harrison Street
Suite 102
Midvale, Utah 84047
(801) 255-2626
REMC
Est. 1997
Midvale, Utah

MARCH 2015

OU23 locations march 2015–GW.dwg



LEGEND

- OU2 BOUNDARY
- OU3 BOUNDARY
- Groundwater Sampling Location

Note: Locations and Operable Unit boundaries approximate.

SCALE
0 400 800
FEET

N

UNITED PARK CITY MINES

FIGURE 2-4 (SHEET 4 OF 4)
GROUNDWATER SAMPLE LOCATIONS

Resource and Environmental Management Consultants
8406 South Harrison Street
Suite 102
Midvale, Utah 84047
(801) 255-2626
REMC
Est. 1997
Midvale, Utah

MARCH 2015

OU23 locations march 2015-GW.dwg

LEGEND

- OU1 BOUNDARY
- OU2 BOUNDARY
- OU3 BOUNDARY
- PROPOSED NEW SOIL SAMPLING LOCATION

SCALE
0 400 800
FEET

N

Note: Locations and Operable Unit boundaries approximate.
Sample locations subject to change based on field conditions observed at time of sampling.

UNITED PARK CITY MINES

FIGURE 3-1

SOIL SAMPLE LOCATIONS

Resource and Environmental Management Consultants
8496 South Harrison Street
Suite 102
Midvale, Utah 84047
(801) 255-2626
REMC
Est. 1997
Midvale, Utah

MARCH 2015

OU23 locations march 2015–SOIL.dwg